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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,322

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EXAMINER

GREEN, ANTHONY J

ART UNIT

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1793

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DELIVERY MODE

03/11/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/765,322	Applicant(s) KOMIYAMA ET AL.	
	Examiner Anthony J. Green	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-12,18,20,22-28 and 34-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-10,12,18, 20,22-26,28,35-36,38-41 is/are rejected.
- 7) ☒ Claim(s) 11,27,34 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 January 2009 has been entered. Claims 1-2, 4, 6-12, 18, 20, 22-28, 34-41 are currently pending in the application.

Claim Objections

2. Claims 9-10, 25-26 and 34 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form.

Claims 9-10 fail to further limit claim 1 as claim 1 recites that the viscosity modifier is selected from silica, bentonite, kaolin and synthetic hectorite therefore since claims 9-10 recite organic viscosity modifiers they fail to further limit claim 1.

Claims 25-26 fail to further limit claim 18 as claim 18 recites that the viscosity modifier is selected from silica, bentonite, kaolin and synthetic hectorite therefore since claims 25-26 recite organic viscosity modifiers they fail to further limit claim 18.

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Claim 34 fails to further limit claim 20 as the viscosity modifier recited in this claim is different from the viscosity modifier recited in claim 20 which itself depends from claim 18.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4, 6-7, 12, 18, 20, 22-23, 28, 35, and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (US Patent No. 3,836,467 A).

The reference teaches, in the abstract, column 2, lines 42+, and the claims, a cold metal forming lubricant comprising optionally water, alkali metal orthophosphate, alkali metal fatty acid soap, and a hydrotropic surface active agent such as a sulphonate compound. The soap may be present in the amount of 20 to 97 %. The composition may further one or more water dispersible diluents in an amount of 0.1 to 80% by weight of at least 1 diluent (see column 3, lines 66+). These diluents may be either inorganic or organic in nature and include antimony oxide, antimony sulfide, arsenious oxide, arsenious sulfide, barium pyrophosphate, bismuth sulfide, boric anhydride, calcium tetraborate, calcium carbonate, cadmium pyrophosphate, cobalt sulfide, chromium fluoride, copper sulfide, ferrous sulfide, ferrous phosphate, lead borate, lead chromate, lead molybdate, lead oxide, lead phosphate, lead metasilicate, lead sulfide, manganese

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pyrophosphate, manganese borate, mercury sulfide, mercury chloride, molybdc oxide, nickel sulfide, molybdenum sulfide, sodium tetraborate (borax), vanadium pentoxide, zinc borate, zinc phosphate, the alkali metal silicates and particularly sodium metasilicate, clays, diatomaceous earth, fuller's earth, bentonite, kaolin, mica, sugar, starch, polyethylene glycols, dextrin, gelatin, gum arabic, bitumin, and the like.

The instant claims are obvious over the reference. The reference teaches that one may include an alkali silicate and accordingly it would have been obvious to include any alkali silicate in the composition. As for the use of an silicate possessing the claimed formula it would it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use any alkali silicate, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 105 USPQ 223 (CCPA 1955). The claim would have been obvious because "a person of ordinary skill has good reason to pursue the known options with his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." As for the addition of bentonite or kaolin this is suggested by the reference as the reference teaches that one or more water dispersible diluents may be added. As for the amounts of the components the reference teaches amounts that encompass or overlap those which are instantly claimed. One of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by the reference overlap the instantly claimed proportions and

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therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

As for the use of stearates (instant claims 6-7 and 22-23) the reference teaches that the fatty acid soaps may be selected from those fatty acid soaps containing from 8 to 22 carbon atoms and preferably 12 to about 18 carbon atoms and accordingly the use of a stearate would have been obvious as “a person of ordinary skill has good reason to pursue the known options with his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” As for claims 12, 28 and 38 it is the position of the examiner that some of the diluents recited in the reference would function as either solid lubricants or extreme pressure additives absent evidence showing otherwise.

5. Claims 1-2, 4, 12, 18, 20 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeanneret (US Patent No. 3,735,797 A).

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The reference teaches, in column 3, lines 16-25, a composition comprising 30 to 100 % of insulating soft refractories (one or a combination thereof); 0 to 70% binder; 0 to 20% suspension agents, surfactants; 0 to 70% swelling clays (bentonite); 0 to 40% graphite; 0 to 2% soap powder; and 0 to 2% fungicide.

The instant claims are obvious over the reference. According to claim 4 the binding agent may be selected from sodium silicate and example 2 recites the use of a sodium silicate having a $\text{SiO}_2:\text{Na}_2\text{O}$ ratio of 3.3:1. It would have been obvious therefore to utilize a sodium silicate having a $\text{SiO}_2:\text{Na}_2\text{O}$ ratio of 3.3:1 as the binder in the reference thus rendering obvious the silicate of claims 1, 4, 18 and 20 because “a person of ordinary skill has good reason to pursue the known options with his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” As for the amounts of the components (claims 1, 2 and 18) the reference teaches amounts that encompass or overlap those instantly claimed. One of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by the reference overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of

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percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

As for claims 12 and 28 the reference teaches that the composition may contain graphite. Accordingly the instant claims are obvious over the reference.

6. Claims 1-2, 4, 6-10, 12, 18, 20, 22-26, 28, 35-36, and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al (US Patent No. 4,130,440A).

The reference teaches, in the abstract, column 2, lines 62+, and the claims, a self-curable inorganic composition consisting of (A) an alkali silicate as binder; (B) about 30 to 300% by weight based on the solids content of the binder (A) of a hardener; (C) 0 to about 20% by weight of another additive selected from the group consisting of coloring agents, thickeners, water repellents, curing retarders, dispersants, defoamers and leveling agents, and (D) 0 to about 80% by weight based on the weight of the composition in the uncured state, of a filler, aggregate or reinforcing material.

According to column 4, lines 58+, the thickener may be water soluble polymers such as methyl cellulose, sodium polyacrylate and polyvinyl alcohol. Column 4, lines 61+ teaches that the examples of the water repellents are silicone emulsions, metal soaps such as aluminum stearate and paraffins. Column 5, lines 6+, teaches that the fillers include talc, diatomaceous earth, kaolin, potter's earth and finely divided calcium carbonate.

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The instant claims are obvious over the reference. As for the type of alkali silicate the reference teaches, in the examples, sodium silicate No. 4, which corresponds to a molar ratio of 3 and No. 3 which corresponds to a molar ratio of 3. Accordingly the use of the types of alkali silicates recited in instant claims 1, 4, 18, 20, 35, and 39 are rendered obvious. As for the lubricating component the reference teaches metal soaps and paraffins thus rendering obvious the lubricating components recited in claims 1, 6-8, 18, 22-24, 35, and 40-41. As for the amount of the components the reference teaches amounts that encompass or overlap those instantly claimed. One of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by the reference overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003). Thus the

amounts recited in claims 1, 2, 18, and 35 are rendered obvious.

With respect to claims 9-10, 25-26, 36, the reference teaches, in column 4, lines 58+, that thickeners such as various celluloses and polyvinyl alcohol may be added into the composition. As for claims 12, 28 and 38 it is the position of the examiner that some of

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the materials utilized in the reference as the filler or aggregate will function as the solid lubricant and/or extreme pressure additive absent evidence showing otherwise.

Accordingly the instant claims are obvious over the reference.

Allowable Subject Matter

7. Claims 11, 27, 34 and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and provided that the claim objection to claim 34 is overcome.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Green whose telephone number is (571)272-1367. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry A. Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anthony J Green/

**Primary Examiner
Art Unit 1793**

ajg
March 10, 2009